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CLAIMS

That which is claimed:

1. A method of operating a data network between a routing gateway for a subscriber and a data service provider providing a data service, the method comprising:

10 receiving from the data service provider an identification of the routing gateway, an identification of the data service provider, and data flow characteristics of the data service for a session of the routing gateway using the data service provided by the data service provider;

responsive to receiving the identification of the routing gateway, the
15 identification of the data service provider, and the data flow characteristics for the data service, saving the data flow characteristics of the data service for the routing gateway at the data network; and

forwarding the data flow characteristics of the data service to the routing gateway.

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2. A method according to Claim 1 wherein the routing gateway is coupled to the data network via a digital subscriber line and wherein the identification of the routing gateway comprises a digital subscriber line identification.

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3. A method according to Claim 1 wherein the data flow characteristics of the data service include a bandwidth characterization for the data service and a priority characterization for the data service.

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4. A method according to Claim 1 wherein receiving further includes receiving an authorization code for the data service, the method further comprising; before saving the data flow characteristics, validating the authorization code.

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5. A method according to Claim 1 wherein saving the data flow characteristics at the data network comprises creating an application flow control record for the routing gateway.

5 6. A method according to Claim 1 wherein saving the data flow characteristics comprises saving the data flow characteristics at first and second databases within the data network.

10 7. A method according to Claim 6 wherein the first database is associated with a concentrator and the second database is associated with a service manager.

 8. A method according to Claim 1 wherein receiving is preceded by:
receiving a request from the routing gateway for a session using the data service provided by the data service provider; and
15 forwarding the request from the routing gateway to the data service provider.

 9. A method according to Claim 8 further comprising:
providing an interconnection between the routing gateway and the data service provider in accordance with the data flow characteristics to thereby support a session
20 of the routing gateway using the data service provided by the data service provider.

 10. A method according to Claim 9 further comprising:
deleting the data flow characteristics saved at the data network for the session of the routing gateway using the data service provided by the data service provider;
25 and
terminating the interconnection between the routing gateway and the data service provider to thereby terminate the session of the routing gateway using the data service provided by the data service provider.

30 11. A method according to Claim 10 further comprising:
before deleting the data flow characteristics, receiving a request from the data service provider to delete the data flow characteristics for the session of the routing gateway using the data service, wherein the data flow characteristics are deleted responsive to receiving the request.

35 12. A method of operating a data service provider providing a data service over a data network to a routing gateway for a subscriber using the data service, the method comprising:

5 transmitting to the data network an identification of the routing gateway, an
identification of the data service provider, and data flow characteristics of the data
service for a session with the routing gateway using the data service;

 providing the data service over the data network and routing gateway in
accordance with the data flow characteristics transmitted to the data network to
10 support a data session of the data service provider with the routing gateway.

13. A method according to Claim 12 wherein the routing gateway is coupled
to the data network via a digital subscriber line and wherein the identification of the
routing gateway comprises a digital subscriber line identification.

15 14. A method according to Claim 12 wherein the data flow characteristics of
the data service include a bandwidth characterization for the data service and a
priority characterization for the data service.

20 15. A method according to Claim 12 wherein transmitting to the data network
further includes transmitting an authorization code for the data service, the method
further comprising:

 before providing the data service, receiving a validation of the authorization
code from the data network.

25 16. A method according to Claim 12 wherein transmitting is preceded by:
receiving a request from the routing gateway for a session using the data
service.

30 17. A method according to Claim 12 further comprising:
transmitting a request to the data service provider to delete the data flow
characteristics for the session of the routing gateway using the data service.

18. A method according to Claim 17 further comprising:
35 after transmitting the request to delete the data flow characteristics,
terminating the data service over the data network and routing gateway.

5 19. A method of operating a routing gateway providing subscriber use of a data service provided by a data service provider over a data network, the method comprising:

 receiving data flow characteristics of the data service for a session of the routing gateway using the data service provided by the data service provider; and

10 providing access to the data service over the data network in accordance with the data flow characteristics received from the data network to support a data session with the data service provider.

 20. A method according to Claim 19 wherein the routing gateway is coupled
15 to the data network via a digital subscriber line.

 21. A method according to Claim 19 wherein the data flow characteristics of the data service include a bandwidth characterization for the data service and a priority characterization for the data service.

20 22. A method according to Claim 19 wherein receiving is preceded by:
 transmitting a request to the data service provider for a session using the data service provided by the data service provider.

25 23. A data network providing a data connection between a routing gateway for a subscriber and a data service provider providing a data service, the data network comprising:

 a first transceiver configured to receive from the data service provider an identification of the routing gateway, an identification of the data service provider,
30 and data flow characteristics of the data service for a session of the routing gateway using the data service provided by the data service provider;

 a memory configured to save the data flow characteristics of the data service for the routing gateway at the data network responsive to receiving the identification of the routing gateway, the identification of the data service provider, and the data
35 flow characteristics for the data service; and

 a second transceiver configured to forward the data flow characteristics of the data service to the routing gateway.

5 24. A data network according to Claim 23 wherein the routing gateway is coupled to the data network via a digital subscriber line and wherein the identification of the routing gateway comprises a digital subscriber line identification.

10 25. A data network according to Claim 23 wherein the data flow characteristics of the data service include a bandwidth characterization for the data service and a priority characterization for the data service.

15 26. A data network according to Claim 23 wherein the first transceiver is further configured to receive an authorization code for the data service, and wherein the memory is further configured to validate the authorization code before saving the data flow characteristics.

20 27. A data network according to Claim 23 wherein the memory is further configured to save the data flow characteristics at the data network as an application flow control record for the routing gateway.

25 28. A data network according to Claim 23 wherein the memory is further configured to save the data flow characteristics at first and second databases within the data network

 29. A data network according to Claim 28 wherein the first database is associated with a concentrator and the second database is associated with a service manager.

30 30. A data network according to Claim 23 wherein the second transceiver is further configured to receive a request from the routing gateway for a session using the data service provided by the data service provider, and wherein the first transceiver is further configured to forward the request from the routing gateway to the data service provider wherein the first transceiver is still further configured to
35 receive the identification of the routing gateway, the identification of the data service provider, and the data flow characteristics of the data service for a session of the routing gateway after forwarding the request from the routing gateway.

5 31. A data network according to Claim 30 wherein the first and second
transceivers are further configured to provide an interconnection between the routing
gateway and the data service provider in accordance with the data flow characteristics
to thereby support a session of the routing gateway using the data service provided by
the data service provider.

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 32. A data network according to Claim 31 wherein the memory is further
configured to delete the data flow characteristics saved at the data network for the
session of the routing gateway using the data service provided by the data service
provider, and wherein the first and second transceivers are further configured to
15 terminate the interconnection between the routing gateway and the data service
provider to thereby terminate the session of the routing gateway using the data service
provided by the data service provider.

 33. A data network according to Claim 32 wherein the first transceiver is
20 further configured to receive a request from the data service provider to delete the
data flow characteristics for the session of the routing gateway using the data service,
and wherein the memory is further configured to delete the data flow characteristics
responsive to receiving the request to delete the data flow characteristics.

25 34. A data service provider providing a data service over a data network to a
routing gateway for a subscriber using the data service, the data service provider
comprising:

 a transceiver configured to transmit to the data network an identification of the
routing gateway, an identification of the data service provider, and data flow
30 characteristics of the data service for a session with the routing gateway using the data
service and configured to provide the data service over the data network and routing
gateway in accordance with the data flow characteristics transmitted to the data
network to support a data session of the data service provider with the routing
gateway.

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 35. A data service provider according to Claim 34 wherein the routing
gateway is coupled to the data network via a digital subscriber line and wherein the
identification of the routing gateway comprises a digital subscriber line identification.

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36. A data service provider according to Claim 34 wherein the data flow characteristics of the data service include a bandwidth characterization for the data service and a priority characterization for the data service.

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37. A data service provider according to Claim 34 wherein the transceiver is further configured to transmit an authorization code for the data service to the data network, and still further configured to receive a validation of the authorization code from the data network before providing the data service.

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38. A data service provider according to Claim 34 wherein the transceiver is further configured to receive a request from the routing gateway for a session using the data service wherein the transmitter is further configured to transmit the identification of the routing gateway, the identification of the data service provider, and the data flow characteristics of the data service responsive to receiving the request from the routing gateway.

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39. A data service provider according to Claim 34 wherein the transceiver is further configured to transmit a request to the data network to delete the data flow characteristics for the session of the routing gateway using the data service.

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40. A data service provider according to Claim 39 wherein the transceiver is further configured to terminate the data service over the data network and routing gateway after transmitting the request to delete the data flow characteristics

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41. A routing gateway providing subscriber use of a data service provided by a data service provider over a data network, the routing gateway comprising:

a transceiver configured to receive data flow characteristics of the data service for a session of the routing gateway using the data service provided by the data service provider, and configured to provide access to the data service over the data network in accordance with the data flow characteristics received from the data network to support a data session with the data service provider.

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5 42. A routing gateway according to Claim 41 wherein the transceiver is
coupled to the data network via a digital subscriber line.

 43. A routing gateway according to Claim 41 wherein the data flow
characteristics of the data service include a bandwidth characterization for the data
10 service and a priority characterization for the data service.

 44. A routing gateway according to Claim 41 wherein the transceiver is
further configured to transmit a request to the data service provider for a session using
the data service provided by the data service provider after receiving the data flow
15 characteristics.

 45. A computer program product configured to operate a data network
between a routing gateway for a subscriber and a data service provider providing a
data service, the computer program product comprising a computer useable storage
20 medium having computer-readable program code embodied in the medium, the
computer-readable program code comprising:

 computer-readable program code that is configured to receive from the data
service provider an identification of the routing gateway, an identification of the data
service provider, and data flow characteristics of the data service for a session of the
25 routing gateway using the data service provided by the data service provider;

 computer-readable program code that is configured to save the data flow
characteristics of the data service for the routing gateway at the data network
responsive to receiving the identification of the routing gateway, the identification of
the data service provider, and the data flow characteristics for the data service; and
30 computer-readable program code that is configured to forward the data flow

characteristics of the data service to the routing gateway.

 46. A computer program product configured to operating a data service
provider providing a data service over a data network to a routing gateway for a
35 subscriber using the data service, the computer program product comprising a
computer useable storage medium having computer-readable program code embodied
in the medium, the computer-readable program code comprising:

5 computer-readable program code that is configured to transmit to the data network an identification of the routing gateway, an identification of the data service provider, and data flow characteristics of the data service for a session with the routing gateway using the data service; and

10 computer-readable program code that is configured to provide the data service over the data network and routing gateway in accordance with the data flow characteristics transmitted to the data network to support a data session of the data service provider with the routing gateway.

47. A computer program product configured to operate a routing gateway
15 providing subscriber use of a data service provided by a data service provider over a data network, the computer program product comprising a computer useable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

20 computer-readable program code that is configured to receive data flow characteristics of the data service for a session of the routing gateway using the data service provided by the data service provider; and

computer-readable program code that is configured to provide access to the data service over the data network in accordance with the data flow characteristics received from the data network to support a data session with the data service
25 provider.